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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/412,085 10/04/99 MIZRAHI

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HM12/0614

EXAMINER

PRATS, F

ART UNIT

PAPER NUMBER

1651

DATE MAILED:

06/14/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/412,085

Applicant(s)

MIZRAHI ET AL.

Examiner

Francisco C Prats

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,13,21 and 24-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,13,21 and 24-39 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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DETAILED ACTION

1. The amendment filed April 9, 2001, has been received and entered. The text of those sections of Title 35, U.S. Code, not included in this action can be found in a prior office action.
2. Claims 2-12, 14-20, 22 and 23 have been cancelled.
3. Claims 24-39 have been added.
4. Claims 1, 13, 21 and 24-39 are pending and are examined on the merits.

Claim Rejections - 35 USC § 103

5. Claims 1, 13, 21 and 24-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey et al (U.S. Pat. 4,771,001) in view of Lehnhardt et al (U.S. Pat. 5,426,219) for the reasons of record set forth at pages 4-7 of the office action of December 19, 2000.

All of applicant's argument has been fully considered but is not persuasive of error. While it is noted that Bailey does not exemplify a starting material containing calcium lactate, Bailey clearly discloses that calcium salts can be present in the fermentation medium. Thus, the artisan of ordinary skill clearly would have recognized that when calcium is in the medium, calcium lactate would form as lactic acid is produced at the disclosed pH of the fermentation medium.

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It is also noted that Bailey discloses dilute solutions of lactate in the extraction procedures performed therein. However, it is respectfully pointed out that Bailey is not applied under § 102. Thus, the difference between the claimed lactate concentration and that disclosed in Bailey has been acknowledged. As an aside, note specifically that claim 1 requires only a 10% lactate solution, not the 12% asserted by applicant.

It is also noted that the secondary Lehnhardt reference does not disclose an amine extraction. However, it is again pointed out that the rejection at issue is made under § 103(a), and that the differences between the claims and the prior art is acknowledged. Note specifically that in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Further still, it is respectfully submitted that applicant's argument clearly construes Lehnhardt's disclosure too narrowly. Nowhere does Lehnhardt suggest that concentrated lactate solutions are suitable only if the extractant is an oxygenated organic solvent and if the acidulated solution is

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saturated with certain electrolytes. Rather, Lehnhardt clearly discloses that the concentration method is "conventional." Moreover, Lehnhardt clearly discloses that concentrating the lactate solution is desirable before acidulation, the exact step employed by Bailey. That is, Lehnhardt makes it clear that relatively high concentrations of lactate are desirable when purifying lactic acid by a process having the same basic steps as Bailey -- fermentation, acidulation, extraction. Contrary to applicant's argument, there is nothing whatsoever in Lehnhardt suggesting that concentrating the lactate solution prior to acidulation would be undesirable if an amine extractant were used instead of the solvents used therein. Moreover, applicant has provided no evidence demonstrating that the skilled artisan would have had anything except a reasonable expectation that Lehnhardt's concentration step would be applicable to Bailey's extraction.

It is also noted that applicant alleges an unexpected result when the lactate concentration is increased to greater than 12%, based on the evidence presented in Figure 4. However, on the current record it merely appears that if one concentrates the lactate solution before acidulation and extraction, one can obtain a more concentrated solution after extraction. However, it is respectfully submitted that this result is expected.

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Moreover, review of Figure 4 and the accompanying discussion at page 34 of the specification makes it clear that the import of the data presented is that including sulfuric acid in the amine extractant at certain concentrations increases product recovery at starting concentrations below about 18 to 20%. While this appears to be unexpected, the claims are clearly not commensurate in scope with this showing of unexpected result since most of the claims do not require a sulfuric acid enhancer in the extractant, and those that do require a sulfuric acid enhancer mention nothing about the starting concentration of the lactate solution. It is therefore respectfully submitted that the rejection must be maintained.

6. No claims are allowed.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS

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of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francisco C Prats whose telephone number is 703-308-3665. The examiner can normally be reached on Monday through Friday, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 703-308-4743. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 for regular communications and 703-305-3014 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.



Francisco C Prats
Primary Examiner
Art Unit 1651

FCP
June 13, 2001